Work Orde			<del></del>	*926	355	*							Page 1
Revision ID:	D4101-041 Pre-Flight Step	o Assembly		Accept	*N	1900	<b>040</b>	100	)*	Setup	Start Stop	*N:	S1* S2*
Start Date: Required Date: Reference:	11/02/12 11/23/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*	•		Cust Item I Customer:	D:						
Approvals:		n: MLブ	Date: <u>\ と \ \</u> - C				ite:			Run	Start Stop	*N  *N	R1* R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours		Tool ID	Tool #	Plan Code	Accept Qty	Re Qt	-	Reject Number	Insp. Stamp
Draw Nbr	Rev	ision Nbr									•		
D4101	В									<u>-</u>		<u>, i</u>	——————————————————————————————————————
*1 \\ \tag{*2} \tag{*3} *	•	Memo 1- Assemb	ole as per dwg	0.00	`				42		<del></del> .		JS13/
110 .*110* QC Quality Control		QC5- Inspect part com  Memo	pleteness to step on W/O	0.00	3.4				4		<u> </u>		
*120 *120* Packaging Packaging		Identify as per dwg & Memo	Stock Location:	0.00 0.00 > 980 > 980	) }	) <i>&gt;</i> X			-4x	<u>,                                      </u>		 13-	SP.
			PPF	). 980	756	· 2x	*						. •

												DQA:	D	ate:	
NCR:	Yes	/ No				WORK ORDER NON-C	COI	NFORI	MANCE / UPD	ATE					
												QA Closed:	D.	ate:	
Work Orde	er:					DISPOSITION				AGAINST D	ΕP	PARTMENT	PROCESS		
Part No			Rework Scrap Use-as-is Work Order Update	Scrap Machining Small Fab se-as-is Thermoforming Finishing			Small Fab Finishing		Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier			Engineering Quality Other			
Root					Descri	iption of work order update		Initial	Actio	on	T	Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descri	ption	$\perp$	Date	Verification	on	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved															
							AUL	T CATE	GC)RY						
Landi	Landing Gear  Bending  Centre Not Concentric to O/S				o/s	General Bend BOM/Route	Grain Hardware			-	Ovalized Over/Under	tolerance		Pressure/Forced Temperature/Cure	
	Cracks Crushed/Crimped					Broken/Damaged Burrs		1 '	on Incomplete ions Incomplete/Ui	nclear	┥	┥ ⊨┥			Weld Wrong Stock Pulled
	Н	Cuffs				Contamination		Mainte	· ·		-1	Part Moved	Ü	<u> </u>	, , , , , , , , , , , , , , , , , , , ,

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

November-06-12	2 12:31:56 1	PM										
Item ID:	D4101-041			Accept	*N900	<b>040</b>	100	)*	Setup	Start	*NS	<b>S1</b> *
Revision ID:										Stop	** 10	<b>&gt;</b> 0*
Item Name:	Pre-Flight St	ep Assembly									*N:	7/"
Start Date:	11/02/12	Start Qty: 4.00	*4*		Cust Item I	D:						
Required Date:	: 11/23/12	<b>Req'd Qty:</b> 4.00	*4*		Customer:							
Reference:									_	<b>C</b> 4 4		
Approvals:	Process P	lan:	Date:	Tooling:	D:	ate:			Run Start		"1711	₹1*
	QC:		Date:	<b>SPC (Y/N):</b>	Date:				Stop	*NF	₹2*	
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Re Qt	•	Reject Number	Insp. Stamp
130		QC21- Final Inspection	Work Order Release	0.00					1	,   .	1. 1	\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
*130* QC Quality Control		Мето		0.00					_ 17	13	14 9 mr	<u> </u>

NCR:	Yes	/	No	

# WORK ORDER NON-CONFORMANCE / UPDATE

DQA:	Date:	v

							,		QA Closed:	Date:				
Work Orde	er:				DISPOSITION			AGAINST DEI	DEPARTMENT/PROCESS					
Part No					Rework Scrap Use-as-is Work Order Update	Scrap Machining Small Face-as-is Thermoforming Finishi				Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other			
Root				Descri	ption of work order update	Initial	Actio							
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Descri	ption	Sign & Date	Verification	QC Inspector			
Doc/Data														
Equip/Tooling														
Operator														
Material														
Setup		į												
Other														
Process						:								
Supplier										:				
Training										•				
Unapproved														
	<u> </u>				F	AULT CATE	GCIRY							
Landi	ng Gear				General				•		_			
	Bending				Bend	Grain			Ovalized		Pressure/Forced			
	Centre I	Not Conce	ntric to	o/s	BOM/Route	Hardwa	re		Over/Under	tolerance	Temperature/Cure			
	Cracks			ļ	Broken/Damaged	Inspect	on Incomplete		Part Incorred	ct	Weld			
	Crushed	/Crimped		<u> </u>	Burrs	Instruct	ions Incomplete/Ur	nclear	Part Lost/Mi	ssing	Wrong Stock Pulled			
	Cuffs				Contamination	Mainte	nance		Part Moved					
	Heat Tre	eat			Countersink	Mislabe	led		Positioned V	Vrong	_			
		on Strip in	Tube	<u></u>	Cut Too Short	Misread	ł		Power Loss/	Surge	Other			
	Ripples				Drill Holes	Offset								
ļ	Torque	Waves in E	xtrusio	n [_	Drawing	Out of 0	Calibration							
	Turning Sequence Finish				Finish	Out of 9	Sequence							
	Wave/Twist in Tube				Folio	Outside	Dimensions							

## **Picklist Print**

November-06-12 12:31:56 PM

Work Order ID:

92655

Parent Item:

D4101-041

Parent Item Name: Pre-Flight Step Assembly

**Start Date:** 11/02/12

Required Date: 11/23/12

Page !

Start Qty: 4.00

Required Qty: 4.00

Location   Loc Oty   Loc Code   GA   9     4   1   4   1   1   1   1   1   1	
Location   Loc Oty   Loc Code   GA   9	4 ES 13 /03/01
Location   Loc Oty   Loc Code	
GA 9 4 4 4 5 61819 1 4 5 7 81730 8 5 8 5 1 5 6 6 6 6 7 8 1 7	
61819 1 24 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1	
81730 8	- 0111
D4101-3 Manufactured No 100 Each 2.0000 1 Step	- // // /
Step	4 \$ / /
	CD13/03/01
ST237 2	2027701
81946 2	D73 77 01
<b>D4101-5</b> Manufactured No 100 Each 1.0000 <b>1</b>	4 P/ 1 - 1
Spring	-C/3/03/0
<u>Location</u> <u>Loc Qty</u> <u>Loc Code</u>	
ST237 1	_ 1
81736 1	- 01 , .
AN4-22 Purchased No 100 Each 25.0000 1	4 / / / / / / / / / / / / / / / / / / /
Bolt	
<u>Loc Qty</u> <u>Loc Code</u>	<i>'</i>
ST359 25	- <b>/</b>
115669 25	- 0/ / /
NAS1149D0432J Purchased No 100 Each 107.0000 2	8 ES/3/03/N
WASHER	
Loc Qty Loc Code	//
31270	- <b>/</b>
116583 77	_

												DQA:	Dat	e:	
NCR:	Yes	/ No				٧	VORK ORDER NON-C	O	VFORM	MANCE / UP	DATE	•			
												QA Closed:	Dat	te:	
Nork Ord	er:						DISPOSITION				AGAINST DE	PARTMENT	/PROCESS		
Part No.  NCR No.				Rework Scrap Use-as-is Work Order Update			Skid-tube Crosstube  Machining Small Fab  Thermoforming Finishing  Large Fab Composite			Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier			Engineering Quality Other		
Root					Descr	iptic	on of work order update	Ī	nitial	Ac	tion	Sign &			
Cause		Date	Step	Qty		or N	lon-conformance	Ch	ief Eng	Desc	ription	Date	Verification	n	QC Inspector
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upplier							•							Į	
raining															
napproved				<u> </u>				<u> </u>							
							FA	AUL	T CATE	GC)RY					
Landi	_	ı			_	_	General		ı		<del></del>	7	,		
	L	Bending			<u>_</u>	Be			Grain			Ovalized			Pressure/Forced
	<u> </u>	Centre No	ot Concer	ntric to	o/s	_	DM/Route		Hardwa			Over/Under		<del></del>	Temperature/Cure
		Cracks			<u> </u>	-1	oken/Damaged		1	on Incomplete	_	Part Incorre		$\vdash$	Weld
	L	Crushed/0	Crimped.		<u> </u>	Bu		_	1	ions Incomplete/	'Unclear	Part Lost/Mi	issing	Ш'	Wrong Stock Pulled
		Cuffs				_	ntamination	$\vdash$	Mainte		·	Part Moved			
		Heat Trea			 	-	untersink	⊢	Mislabe		<u> </u>	Positioned V	_		
	igsqcup	Inspection		Tube	<u> </u>	-	t Too Short		Misread	i	L	Power Loss/	Surge		Other
		Ripples in					ill Holes	<u> </u>	Offset						
		Torque W	aves in E	xtrusio	n	Dr	awing		Out of (	Calibration					

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

November-06-12 12:31:56 PM

Vork Order ID: Parent Item:	92655 D4101-041				,			Pate: 11/02/12	Required Date: 11/23/12
Parent Item Name:	Pre-Flight Step Asse	embly					Start	<b>Qty:</b> 4.00	Required Qty: 4.00
NAS1149D0463J Washer		Purchased	No		100	Each	4,498.0000	2	8 / 3/03/01
				Location	Loc Oty		Loc Code		
				298	. 156				_ //
				122441	156				_
				ST294	3162				
				123355	3162				
				ST298	1142				- 1101198
				104746	1				_ M124198
				116805	0				_
				119073	20				_
				122452	1121				_
				ST299	38				<u> </u>
				121912	38				- 0111
N310-4		Purchased	No		100	Each	71.0000	1	4 / 7 / 2 / 22 / 20
IUT								· · · · · · · · · · · · · · · · · · ·	- ( D) 01-
				<u>Location</u>	Loc Oty		Loc Code		// /
				ST342	69				_ /
				122800	69				_ MIZ3900
				ST344	2				<u> </u>
				121349	2				_ a/ / ,
MS24665-136		Purchased	No		100	Each	80.0000	1	4
Cotter Pins		rurchasca							5/01/3/25/01
50ttet 1 mo				<b>Location</b>	Loc Qty		Loc Code		. // / /
				ST323	80				
				2421	80			U	
. N. 50 5 030 D. C			Na	<b>444</b> 1	100	Each	84.0000	1	-, <i>U</i> L / /
AN525-832R6		Purchased	No		100	Lacii	91.0000		- / DB/03/2
Screw								100 11 11 11 11 11 11 11 11 11 11 11 11	
				<b>Location</b>	Loc Qty		Loc Code		
			•	ST345	84				_ MU3831(4X)
				120308	1				_ 1145551 4
				120560	83				

						DQA:	Date:	***	
res / No			WORK ORDER NON-C	ONFOR	MANCE / UPDATE	QA Closed:	Date:		
er:			DISPOSITION	DISPOSITION AGAINST DEPARTME					
lo			Rework Scrap Use-as-is Work Order Update	Scrap Machining Small Fab Use-as-is Thermoforming Finishing				Engineering Quality Other	
			Description of work order update	Initial	Action	Sign &			
Date	Step	Qty	or Non-conformance	Chief Eng	Description	Date	Verification	QC Inspector	
			·						
						1			
_									
	er: No No	er: No	er: No	DISPOSITION  Rework Scrap Use-as-is Work Order Update  Description of work order update	DISPOSITION  Rework  Scrap  Use-as-is  Work Order Update  Description of work order update  Initial	DISPOSITION  Rework Skid-tube Crosstube Machining Small Fab Use-as-is Use-as-is Large Fab Composite  Description of work order update Initial Action	WORK ORDER NON-CONFORMANCE / UPDATE  QA Closed:  DISPOSITION  Rework Scrap Use-as-is Vork Order Update  Description of work order update  No.  Description of work order update  OA Closed:  AGAINST DEPARTMENT,  Skid-tube Machining Small Fab Proc Rec/Stor Composite  Description of work order update  No.  Description of work order update	WORK ORDER NON-CONFORMANCE / UPDATE  QA Closed: Date:  DISPOSITION  Rework Skid-tube Crosstube Small Fab Prod. Eng. Coor. Use-as-is Work Order Update Large Fab Composite Supplier  Description of work order update Initial Action Sign &	

#### FAULT CATEGORY **Landing Gear** General Bending Bend Grain Pressure/Forced Ovalized BOM/Route Centre Not Concentric to O/S Over/Under tolerance Temperature/Cure Hardware Broken/Damaged Cracks Inspection Incomplete Weld Part Incorrect Crushed/Crimped. Instructions Incomplete/Unclear Wrong Stock Pulled Burrs Part Lost/Missing Cuffs Contamination Maintenance Part Moved Heat Treat Countersink Mislabeled Positioned Wrong Inspection Strip in Tube Misread Other Cut Too Short Power Loss/Surge Drill Holes Ripples in Bend Offset Torque Waves in Extrusion Out of Calibration Drawing Finish Turning Sequence Out of Sequence Wave/Twist in Tube Folio Outside Dimensions

Process
Supplier
Training
Unapproved

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### **Picklist Print**

November-06-12 12:31:56 PM

Page 3

Work Order ID:

92655

Parent Item:

D4101-041

Heli Coil, screw locking, red

Parent Item Name: Pre-Flight Step Assembly

MS21209C0815

Purchased

No

**Start Date:** 11/02/12

Required Date: 11/23/12

Start Qty: 4.00

Required Qty: 4.00

22.0000

Loc Qty Loc Code Location ST319 22 118159

100

119316

1 21

Each

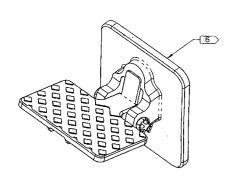
M124328

NCR:	Yes	/	No

## WORK ORDER NON-CONFORMANCE / UPDATE

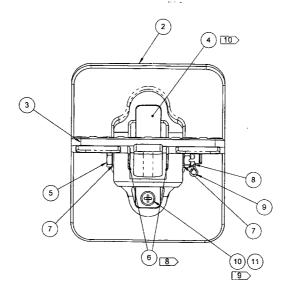
				1
Closed:	Date:		-	
DQA:	Date:	•		-

									QA Closed:	Date	:	
Work Order:					DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No					Scrap Machining Sma Use-as-is Thermoforming Fini		Crosstube Small Fab Finishing Composite	Prod. Eng. Coor. Quality		Engineering Quality Other		
Root				Descr	iption of work order update	Initial	Initial Action		Sign &			
Cause	Date	Step	Qty	or Non-conformance		Chief Eng	ng Description		Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material												
Setup	_	ŀ										
Other												
Process	_										,	
Supplier Training	_											
Unapproved		İ					<u> </u>					
						AULT CATE	GORY				·	
Landing Gear General									<b>-</b>			
-	Bending			_ ,_	╡ ⊢		Grain		Ovalized	<u> </u>	Pressure/Forced	
-	Centre Not Concentric to O/S			<sup>D/S</sup>  -	BOM/Route	Hardwa	<b></b>		Over/Under	<del></del>	Temperature/Cure	
-	Cracks	o ·		-	Broken/Damaged	Inspection Incomplete			Part Incorre	<u>-</u>	Weld	
-		Crushed/Crimped.			Burrs	-	tions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled	
-	_	Cuffs			Contamination	H ' '	ntenance		Part Moved			
-		Heat Treat			Countersink	<del></del>	Mislabeled		Positioned V			
}	<del>_</del>	Inspection Strip in Tube			Cut Too Short Drill Holes	<del></del>	Misread		Power Loss/	Surge	Other	
}-		Ripples in Bend			<b>-</b>	$\vdash$	Offset					
}	_	Torque Waves in Extrusion			Drawing Finish	Out of Calibration						
<b> </b>	Turning Sequence			-	Folio	$\vdash$	Out of Sequence Outside Dimensions					
	Wave/Twist in Tube				TI OIIO	Louiside	ב טווופוואוטווא				<del></del>	



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#### **D4101-041 PRE-FLIGHT STEP ASSEMBLY**

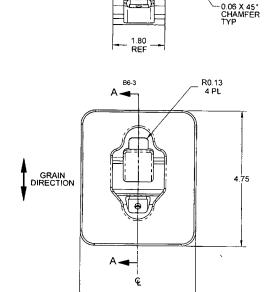
ITEM	QTY -041	PART NUMBER	DESCRIPTION
1	Х	D4101-041	PRE-FLIGHT STEP ASSEMBLY
2	1	D4101-1	BRACKET
3	1	D4101-3	STEP
4	1	D4101-5	SPRING
5	1	AN4-22	BOLT
6	2	NAS1149D0432J	WASHER
7	2	NAS1149D0463J	WASHER
8	1	AN310-4	NUT
9	1	MS24665-136	COTTER PIN
10	1	AN525-832R6	SCREW
11	1_	MS21209C0815	HELICOIL

COPY OT PRESENT CHARTERING ROLLED COPY TO AMENDMENT E WALL NOTICE 92655\_465 12-11-07

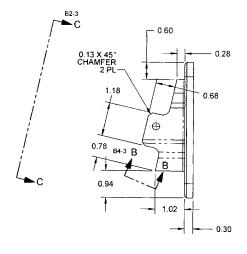


В	NAS1149D0432J WAS NAS1149D0416J (ZN D3-1); ADD SCREW AND HELICOIL (ZN D3-1& B1-3); RE-DESIGN D4101-5 (ZN B4-5)				10.08.05	
A	NEW ISSUE			RF	10.07.12	
REV.	<u></u>		DESCRIPTION	BY	DATE	
DESIGN RF			DART AEROSPACE LTD			
DRAWN		R <b>F</b>	HAWKESBURY, ONTARIO, CANADA			
CHECKED		-#	DRAWING NO.		REV. B	
MFG. APPR.		2/	√D4101		SHEET 1 OF 5	
APPROVED		#	TITLE		SCALE	
DE APPR.		#	PRE-FLIGHT STEP ASSEMBLY NTS			
DATE 10.08.05			COPYRIGHT © 2010 BY DART AEROSPACE LTD  THIS DOCUMENT IN PRIMATE AND CHIPPERTURAL AND IS SUPPLIED ON THE EMPETED CONSTRONT THAT IT IS  NOT TO SE USED FOR HAY PURPOSE ON COMPAGE ON DANN IT HAVE PERSON WITHOUT			

NOTES:
1) MATERIAL: N/A
2) FINISH: NONE
3) TOLERANCES: PER DART OSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: NONE
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4101-041" USING FINE POINT PERMANENT INK MARKER BACK SURFACE
7) WEIGHT: 1.18 lbs
8) INSTALL NAS1149D0432J WASHER IN BETWEEN STEP AND BRACKET MATING FACES
9) TORQUE AN525832R SCREW TO 15-25 in-lb
10) TEXTURED SIDE TO BOTTOM



4.00





#### D4101-1 BRACKET

NOTES:
1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-225/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A

6) IDENTIFICATION: N/A 7) WEIGHT: 0.85 lbs

8

D

DESIGN **DART AEROSPACE LTD** DRAWN RF HAWKESBURY, ONTARIO, CANADA CHECKED DRAWING NO. REV. B D4101 MFG. APPR. SHEET 2 OF 5 APPROVED TITLE SCALE PRE-FLIGHT STEP ASSEMBLY NTS

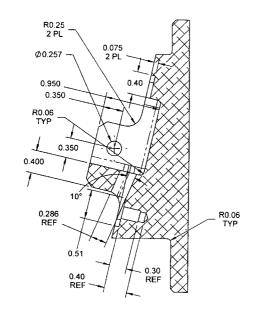
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THE COORDEST IS REPORT AND CONFERENCE AND THE COPYRIGHT TO A CONFERENCE AND THE COPYRIGHT TO A CONFERENCE AND THE COPYRIGHT TO AN OTHER COPYRIGHT TO AN OTHER COPYRIGHT COPYRIGHT TO ANY OTHER COPYRIGHT COPYRIGHT TO ANY OTHER COPYRIGHT COPYRIGHT COPYRIGHT COPYRIGHT TO ANY OTHER COPYRIGHT DE APPR. DATE 10.08.05

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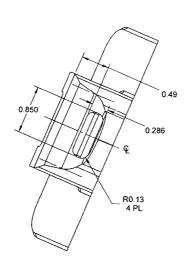
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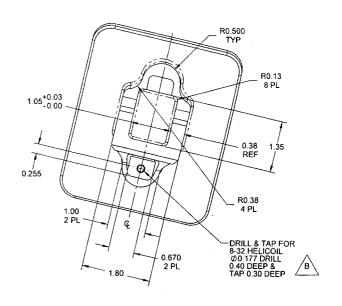


8

SECTION A-A C7-2



VIEW B-B C4-2 SCALE 2X



VIEW C-C SCALE X1.5

RELEASED 2010 -08- 23

DESIGN	RF	DART AEROSPACE LTD			
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA			
CHECKED	-#	DRAWING NO. RE	V. B		
MFG. APPR.	31	D4101 SHEET 3	OF 5		
APPROVED	Q#	TITLE SC	CALE		
DE APPR.	4#	PRE-FLIGHT STEP ASSEMBLY	NTS		
DATE 10.0	08.05	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFERENCE AND AND EXPRESS CONCIDENT ITS NOT TO BE USED FOR ANY HURBORS ON COMPETED ON COMMINICATED TO ANY OTHER PERSON WITHOUT			

